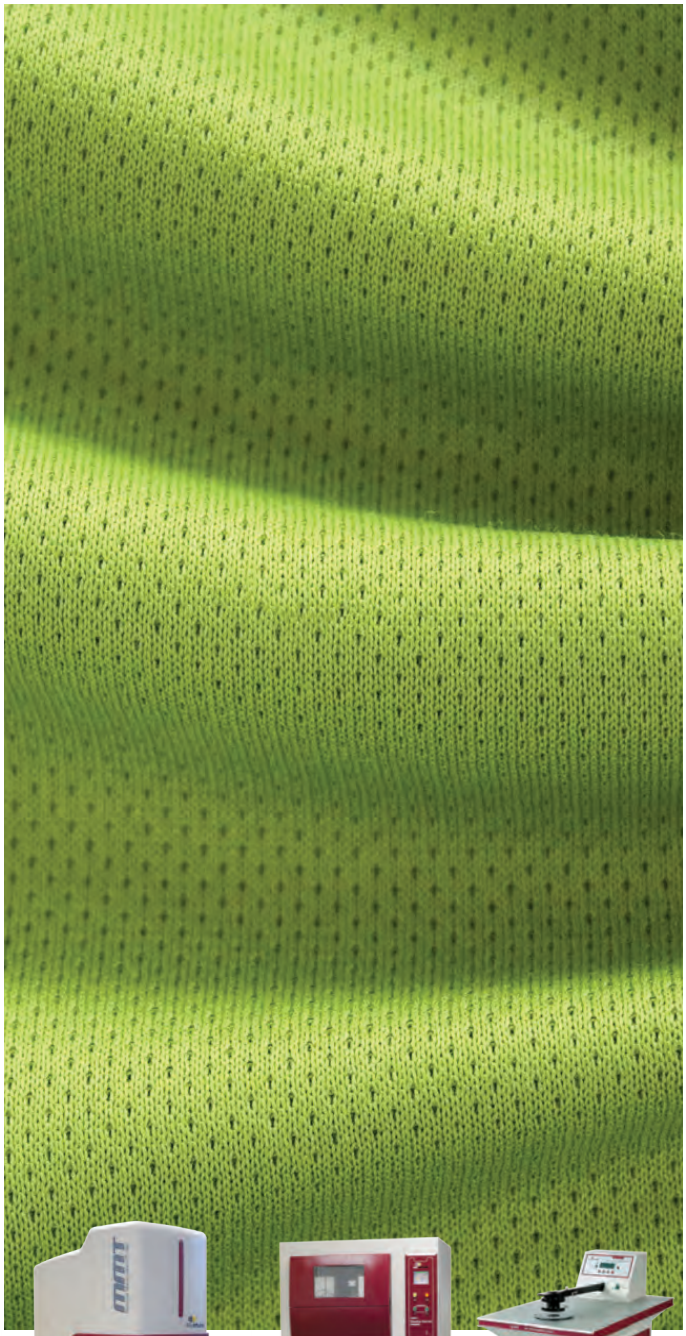
SDL ATLAS®
TEXTILE TESTING SOLUTIONS



PERFORMANCE TESTERS

Performance Textile Testing

Testing for
Performance

Textiles today are specially engineered to provide more than just coverage. They are increasingly designed to give better performance under a specific set of conditions. Many people relate performance fabrics to athletic clothing, however, specialized fabrics extend far beyond active wear. Other uses include outdoor apparel meant to keep you dry and protected from UV rays while maintaining proper body temperature; protective uniforms used for firefighting and the military; and scrubs used in the medical industry.

Testing these fabrics requires looking beyond the more common tests such as shrinkage, colorfastness, and seam strength. Some technical features are more difficult to test, measure, and quantify. Sometimes several individual tests must be done on different portions of a fabric in order to try to categorize the capability.

European Guidelines for Thermoregulatory Properties of Textiles (CEN/TR 16422:2012)

In 2012, the CEN/TC 248 working group developed a new technical report designed to help retailers, manufacturers and consumers with the evaluation of the thermoregulatory properties of textiles. It also helps with the selection of the most appropriate methods and guideline requirements, which would be suitable to define individual material performance requirements for specific end use products.

The report provides guidance through the use of three performance levels for the different thermoregulatory properties:

- Thermal insulation
- Liquid sweat management
- Air permeability
- Water vapor transmission
- Water resistance and repellence

SDL Atlas has a full range of instruments specially designed to keep pace with the advancement of technologies necessary for performance testing, including all major international standards and those recommended by the CEN/TR 16422:2012 report. These include the MMT® Moisture Management Tester, Sweating Guarded Hotplate, AirPerm, HydroPro, and PermaVape. These instruments allow textile manufactures to design and test performance textiles effectively, accurately and quickly.

MMT®
Moisture Management Tester

applications:

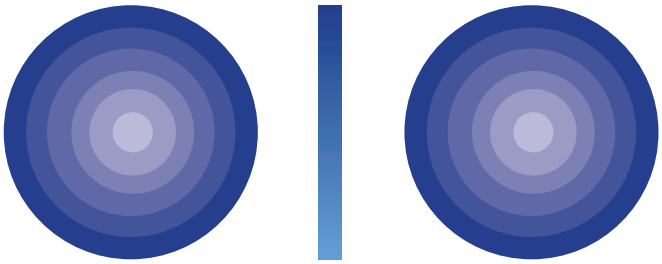
Quality Control | Apparel | Performance

The MMT performs innovative measurement of dynamic moisture transport of performance fabrics.

The MMT is the only instrument on the market that can precisely measure the liquid management properties of performance and technical fabrics, ensuring the comfort and protection that consumers demand.

Water Location vs. Time

Low Water Content



Top (Inner) | High Water Content Measure Time (s) = 120.0 sec | Bottom (Outer)

	Top Surface	Bottom Surface
Wetting Time	2.953	3.046
Absorption Rate (ø/s)	71.8323	68.7287
Max Wetted Radius (mm)	20.0	20.0
Spreading Speed (mm/s)	4.232	4.1326
One Way Transport	-25.8368	
Test Description	MMT	

Even Faster Results

One 2-minute test gives a comprehensive profile of a fabric's performance with the following data:

- Overall Moisture Management Capability
- Accumulative One-Way Transport Capability
- Wetting Time for top and bottom surfaces
- Absorption Rate for top and bottom surfaces Max
- Wetted Radius for top and bottom surfaces
- Spreading Speed for top and bottom surfaces

STANDARDS:

AATCC 195 | GB/T 21655.2

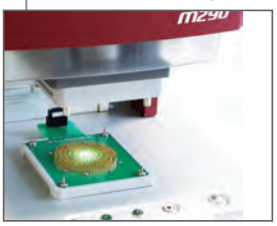
Moisture Management measurements go far beyond the very basic wicking test and let fabric producers design a product that meets the full needs of the end user.

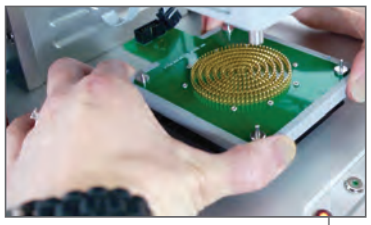
Stretch Fabrics

The optional Stretch Fabric Fixture provides more accurate testing for how some fabrics will behave while in use, particularly those with stretch properties like those used for athletic clothing and underwear.

The percentage of stretch can be easily adjusted to the test's requirements using the scae on the fixture's handle. Samples can be stretched up to 50%.

Upper Sensor and protective translucent door are motorized to automatically move into position





Durable, open case allows easy access to testing samples and instrument sensors

Sweating Guarded Hot Plate

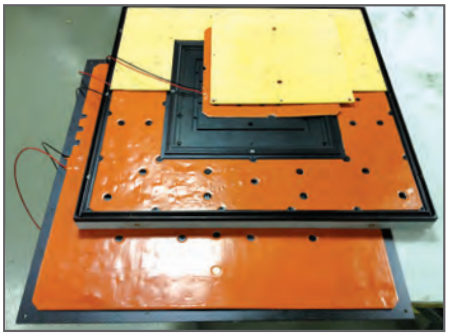
applications:

Quality Control | Apparel | Performance

The Sweating Guarded Hotplate provides a fabric's permeability, breathability and heat loss from sweat evaporation.

Often referred to as the "Skin Model", the Sweating Guarded Hotplate measures thermal properties and water vapor resistance of fabrics and other materials under steady state conditions. The test simulates the heat and mass transfer process which occurs next to human skin.

The sintered (porous) bronze hotplate and controls are integrated into a chamber that is maintained at precise temperature, humidity, and airflow conditions.



The specialized 250 mm by 250 mm sintered bronze hotplate with Individual temperature control of hotplate, side, and bottom guards gives the best simulation of human skin versus other plates that have a distinct pattern of drilled holes. Nine temperature measurement channels (3 sensors in each section) work simultaneously to accurately control and measure the temperatures of the hotplate and guards.

The purpose-built, conditioned cabinet allows for complete control and monitoring of air temperature, air speed, relative humidity, and heater power consumption. The air speed sensor located directly above the sample provides more accurate readings than other available models.

STANDARDS:

ASTM D1518 | ASTM D1518-11a Option 2 | ASTM F1868 | EN 343 | ISO 11092 | GB/T 11048

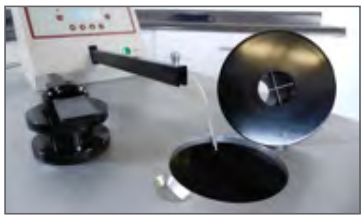
AirPerm
Air Permeability Tester

applications:

Quality Control | Apparel | Performance | Automotive

The AirPerm's advanced pressure system automatically measures the flow of air through a performance fabric.

The AirPerm makes air permeability testing much more affordable while maintaining confidence that test results meet international and retailer standards. Designed to meet air permeability standards for paper, textiles, and non-wovens, the AirPerm provides quick, straightforward results in the unit of measure of your choice.



Automatic ranging system that detects the size of the installed test head and determines the appropriate pressure range required.

The powerful, yet quiet vacuum accommodates a variety of test plates to suit every application and features easy calibration for daily checks.

The long arm and large table allow for larger samples to be evaluated in multiple areas.

STANDARD

TEST HEAD SELECTION

	5 cm²	20 cm²	25 cm²	38 cm²	50 cm²	100 cm²
adidas TM 6.08		●				
ASTM D737	●			●		●
BS 5636	●					
DIN 53887		●			●	●
EDANA 140.1		●			●	
EDANA 140.2		●			●	
GB/T 5453	●	●			●	●
ISO 9237	●	●			●	●
ISO 9073-15		●		●	●	
JIS L 1096-A				●		
TAPPI T251				●		
WSP 70.1	●	●	●	●	●	●
Dense Samples						●

***Black dots denote preferred test head. Red dots denote acceptable alternates.*

HydroPro
Hydrostatic Head Tester

applications:

Apparel | Quality Control | Performance | Automotive

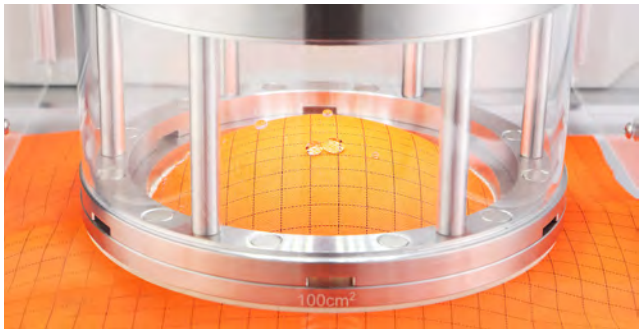
RemoteAccess

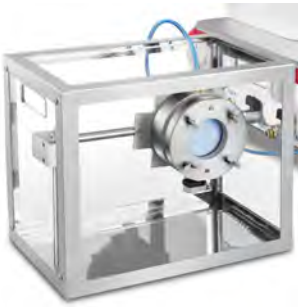
Designed to measure a fabrics' resistance to water, the **HydroPro** offers the best value hydrostatic head tester available

The HydroPro determines the waterproof properties of fabrics such as canvas, coated fabrics, hood fabric, tarpaulin, rain-proof fabrics and geotextiles.

The Fast Test function allows users to rapidly determine a failure point and perform other tasks during 80% of the standard test time. An alarm indicates fail pressure is close.

- Video recording and image capture show real time pressure for review after testing via computer software.
- Testing pressure up to 5 bar
- Pneumatic sample clamping to avoid slippage and leakage
- Automatic water filling and water level detecting
- Full Color Touch Screen Controller with preloaded routines for popular standards and custom programs
- Connects via WiFi to our exclusive RemoteAccess App which alerts the operator when the test is 80% complete
- LED lighting of sample area
- Clear safety shield
- 100 cm² test head included





Optional fixture of Blood Penetration Test for ASTM F1670, BS ISO 13994 and ISO 16603

Optional fixture of Pore Size Test for BS 3321

Video recording and image capture

STANDARDS:

AATCC 127	AATCC 208	ASTM D751 proc B	BS 3424-26 29A	BS EN 20811	BS ISO 13994
Decathlon - DS-0006	Decathlon - DS-270	EN 343	EN 1734	FZT 01004-2008	GB/T 4744
ISO 811	ISO 9073-16	IST 080.4 (01)	IST 080.6 (01)	JIS L1092-A	JIS L1092-B

**Standards for included 100 cm² test head. Other standards can be met with optional accessories.*

PermaVape

applications:

Apparel | Quality Control | Performance

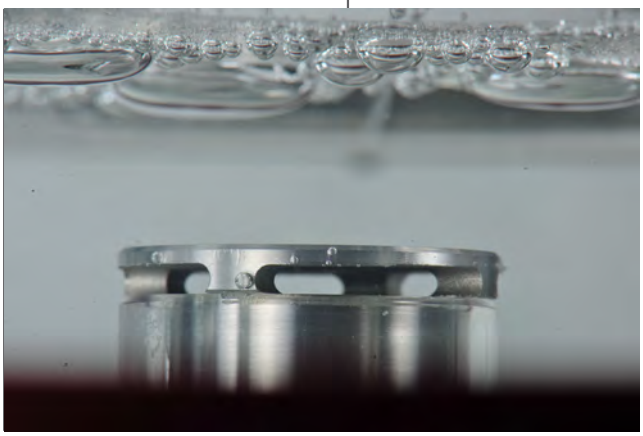
The user-friendly **Perma-Vape** delivers accurate and reliable results for water vapor permeability.

STANDARDS:

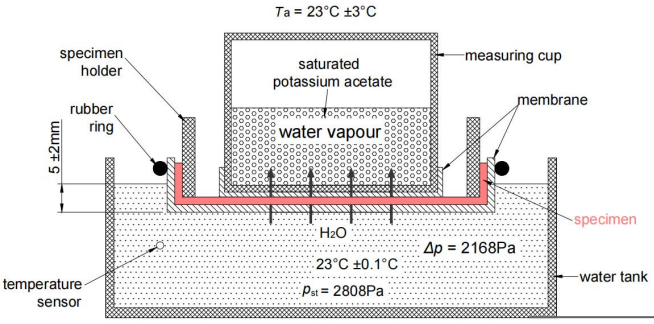
ISO 15496

JIS L1099 Method B1

This water vapor permeability tester utilizes the inverted cup method to measure water vapor transfer, which is a more accurate approach than the dry desiccant cup method. With the inverted cup method, the water sits against the fabric which produces a higher breathability figure, as the fabric isn't buffered by an air gap, which can absorb a large amount of moisture.



The water bath is heated to the required temperature of 23°C and maintained evenly throughout the bath through a circulation pump.



The test station platform is easily adjustable to ensure that the samples are immersed to the proper depth in the bath.

A Precise Method

Studies have shown that inverted cup method can more adequately determine levels of comfort for high physical activity (heavy sweating) because it eliminates the influence of the layer of air.

SDL Atlas also offers other models for Vapor Permeability testers to meet other internationally recognized standards.

Providing Confidence

For over 60 years, the SDL Atlas companies have been providing confidence in standard based testing through expertise and global partnering. Our customers can be assured that they are making informed decisions based on accurate test results.

SDL Atlas experts work closely with standards committees and retailers on development of standards. Our engineers develop instruments to meet these standards. Our service team calibrates the instruments to exacting UKAS and internal standards. High quality consumables that are consistent from batch to batch are also produced and distributed by SDL Atlas.

Consumables

Consumables are a critical part of many textile tests. SDL Atlas produces and distributes a complete line of consumables. Each batch is thoroughly tested to ensure conformity and consistency from batch to batch.

Our consumables offerings include:

- Multifiber
- Cork Liners
- Abradants
- Phenolic Yellowing
- Detergents
- Ballasts
- Crocking Fabric

Calibration & Service

- UKAS calibration
- ISO calibration
- Service support
- Factory trained representatives
- SDL Atlas service technicians

SDL Atlas is a UKAS accredited calibration laboratory No. 0688. With fully trained technicians located in Europe, Asia, and North America, we are prepared to support our customers in maintaining their investments and their confidence in their testing instruments.

Providing confidence in standard based testing through expertise and global partnering

SDL ATLAS®
TEXTILE TESTING SOLUTIONS

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